MAXTECH™

DESIGN | DEVELOP | MANUFACTURE | DEPLOY

REMOTE SOLAR MANAGEMENT SYSTEM I-RMS660-IOT

Product details and brochure

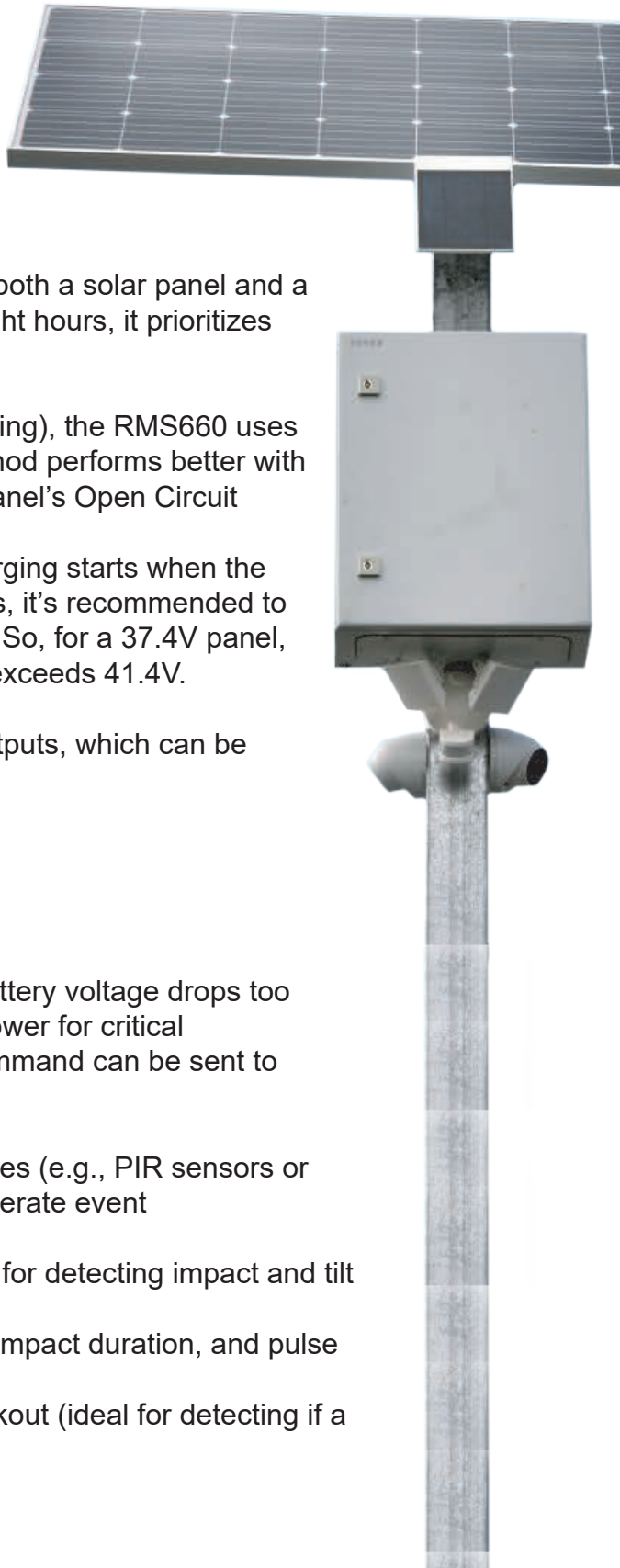


Remote Power Backup is our Business 24/7 - 365

RMS660 Product Introduction

The RMS660 is a digital charge controller designed to manage power for 12V and 48V remote camera systems, offering a higher charge rate than our smaller RMS330. It uses a configurable 3-stage charging algorithm compatible with virtually any battery type. Key settings include:

- Peak Voltage
- Float Voltage
- Absorption Period
- Maximum Charge Current
- Cut-off Voltage (to prevent battery undervoltage)



Thanks to its dual input channels, the RMS660 can use both a solar panel and a 48V power supply (PSU) at the same time. During daylight hours, it prioritizes solar power, switching to the PSU at night.

Instead of standard MPPT (Maximum Power Point Tracking), the RMS660 uses a programmable Fixed Operating Point (FOP). This method performs better with single or dual solar panels. Charging begins when the panel's Open Circuit Voltage (OCV) exceeds 115% of the FOP.
For example: If the panel's optimal voltage is 37.4V, charging starts when the OCV exceeds 43.01V. To account for seasonal variations, it's recommended to set the FOP about 1.5V below the panel's rated voltage. So, for a 37.4V panel, set the FOP to 36V, and charging will begin when OCV exceeds 41.4V.

The RMS660 includes seven solid-state SMART 12V outputs, which can be remotely controlled. Each output features:

- Current limiting
- Short-circuit protection
- ESD protection
- Over-temperature protection

Outputs can be toggled on/off or set to pulse mode. If battery voltage drops too low, non-essential loads can be turned off to preserve power for critical equipment. In case of a camera malfunction, a pulse command can be sent to trigger a remote reset.

The RMS660 supports input channels for security switches (e.g., PIR sensors or break/make switches). When triggered, these inputs generate event messages—useful for tamper alerts inside enclosures.
Additionally, the device includes a built-in accelerometer for detecting impact and tilt events. It can be configured with parameters such as:

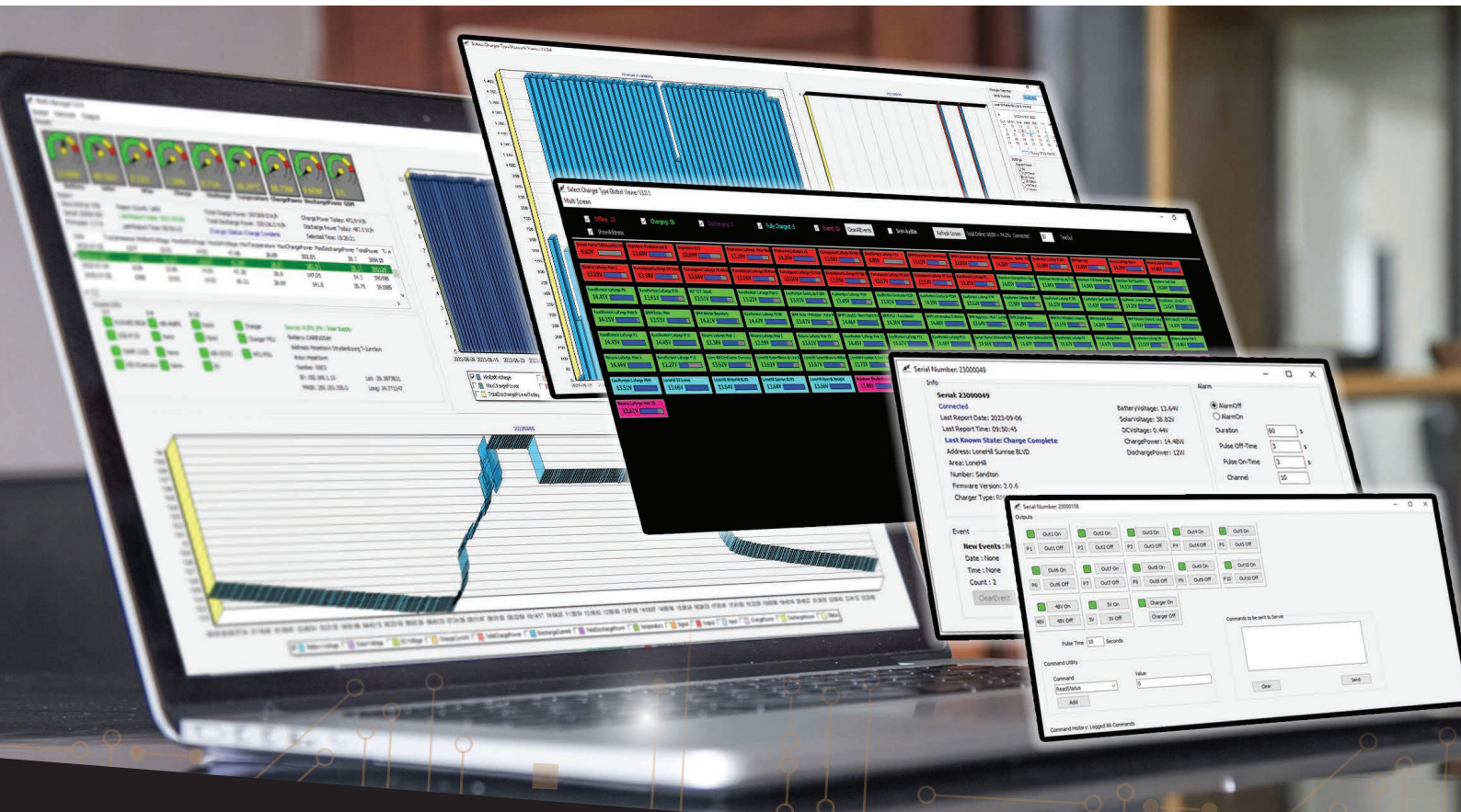
- Impact Detection: X/Y/Z axis thresholds, max G-force, impact duration, and pulse latency
- Tilt Detection: Max tilt angle, hysteresis, and X-axis lockout (ideal for detecting if a pole is being pulled down)

RMS660 Communication and Software

The RMS communicates via an Ethernet connection, transmitting battery and charger data to a dedicated cloud-based server. This data includes battery voltage, charge and discharge currents, charge and discharge power, accumulated charge and discharge power, onboard temperature, network health, and both input and output status.

Our RMS software platform is a powerful monitoring solution designed for managing large groups of chargers. Offered as a monthly service to customers with multiple camera sites, it features automated WhatsApp messaging with daily system reports and event notifications. Key capabilities include secure individual logins, global device monitoring, unit-specific status views, detailed diagnostics, network health monitoring, and output control tools.

Additionally, MXTech provides expert maintenance and installation teams to support your power infrastructure. Leveraging our platform, we perform proactive maintenance tasks such as cleaning solar panels, detecting 220VAC line losses, identifying battery performance issues, and resolving network-related problems, ensuring your system runs smoothly and reliably.





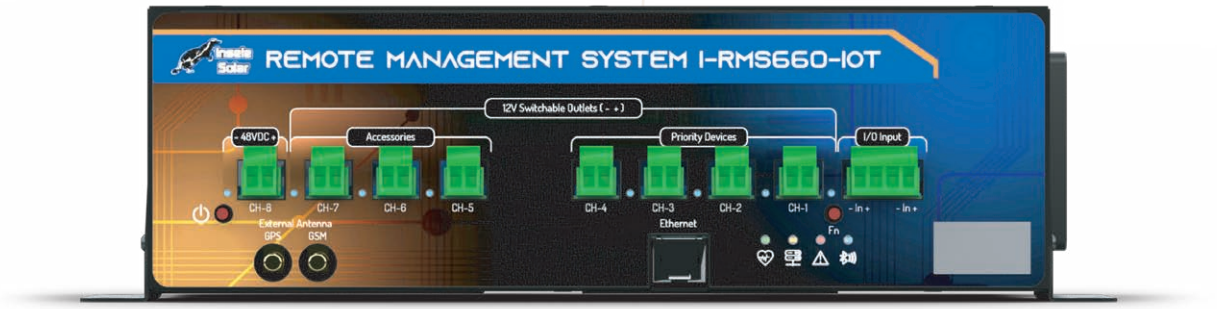
RMS660 Technical Specifications

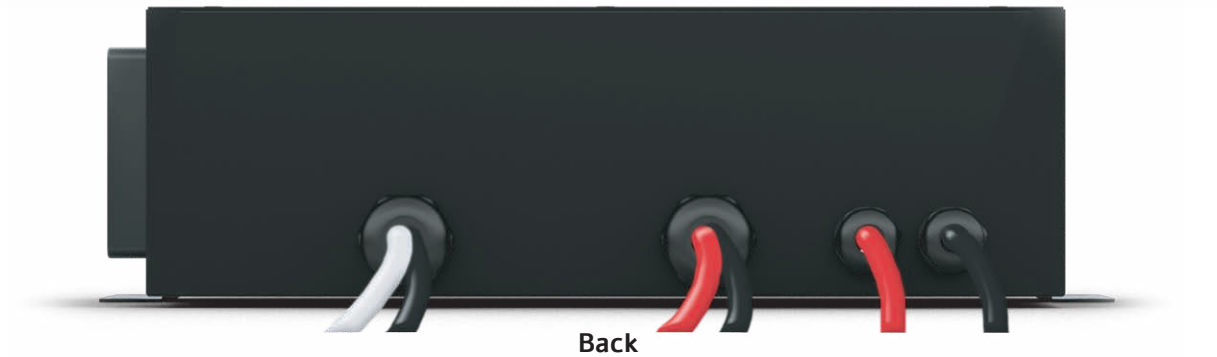
Power	
Rating	660W Charger. Maximum Charge @ 14.5V 50A 93% Efficiency
Protection	Dual 50V Max Surge Protected Input For Solar Or 48V AC/DC Converter.
Maximum Input Current:	20A
Max Discharge Power:	348W (12V @ 3A X 7 Channels + 48V @ 2A)
Unit Power Consumption	4.5W
AC Frequency Range	46-65Hz
Battery	
Recommended Battery	200Ah 12.8V Max
Battery Types Supported	All Types Lead Acid And Chargeable Lithium Chemistries
Battery Protection Low	Programmable
Battery Charging Modes And Stages For Diff Battery Types	3 Stage “bulk Cc Charge Followed By Peak Cv Followed By Absorption Time And Finally Float Stage” All 3 Settings Are Programmable.
Battery Cables	Battery Cables 1.3m Each, 10mm2 Pre-fitted With 10mm Ring Lugs.
Misc.	
Weight	Weight: 3.0kg (RMS Controller Only)
Dimensions	285mmx86mmx190mm
Operating Tempreture	65° Ambient Temperature. Minimum Operating Temperature -30°
Operating Humidity	55% Normal 95% Non-condensing *on Request Coastal Spec
Enclosure Material	Powder-coated Sheet Metal And Anodized Aluminium
Warrenty	24 Month Warranty On Outright Purchase. 3 Year Warranty Offered With MX-Tech Maintenance Contract

I/O	
12V 3A Solid State Outputs With Over Current And Over Temperature	7
12V Output Efficiency	99.20%
Variance On 12V Outputs	Equal To Battery Voltage
48V 2A Boost Converter Fuse Protected.	1
Ethernet Port, RJ45 10/100	1
Digital Input Ports	Opto-isolated Digital Input For Standard Door Switch Normal Closed Type. 5-24VDC
No of Digital Input Ports	2
Solar	
Max Solar Input Voltage	50V
Charger Type	MPPT
Minimum Solar Input Voltage:	18V
Solar Connection Type	Wires With Terminal Screw Connectors
Features	
Auto Power Mode Switch	Yes
Anti-Tamper System	Yes, Accelerometer Programmable Impact And Tilt
Internal Temperature Sensor (PCB Monitor)	Yes
Remote Firmware Upgrade	Yes
Cooling System	Automatic Forced Air Cooling Is Implemented To Keep The Rms Cool. Designed For Max

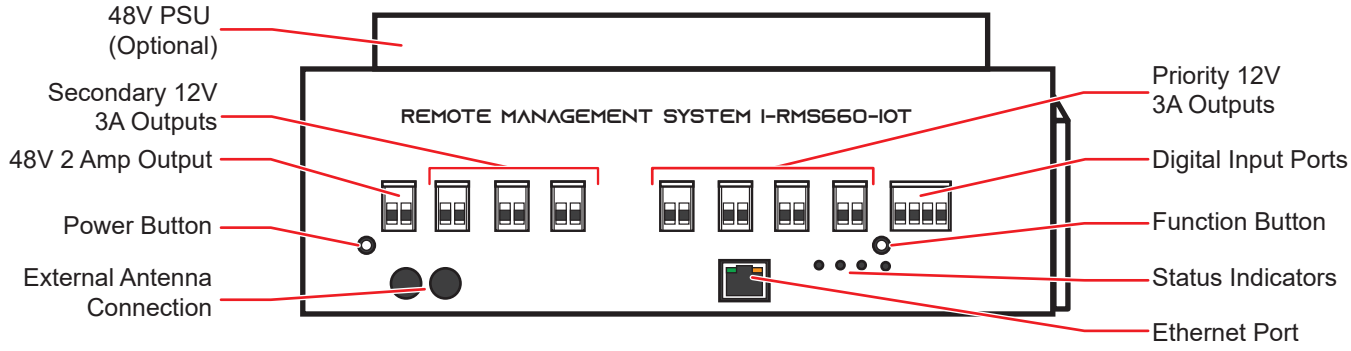
Unit Details

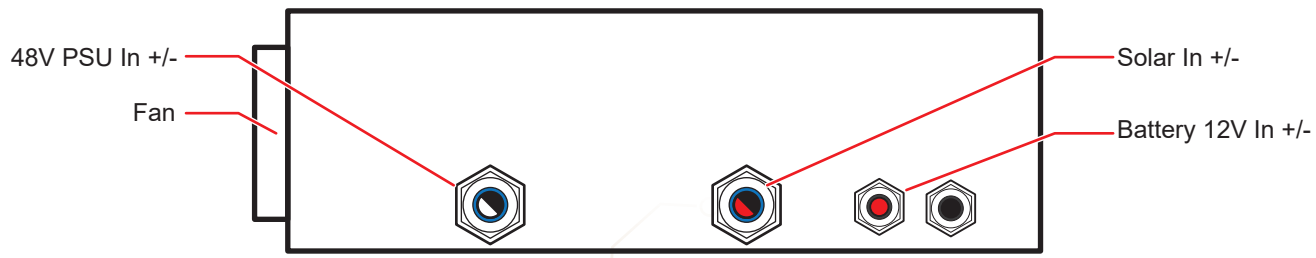
Front





Back





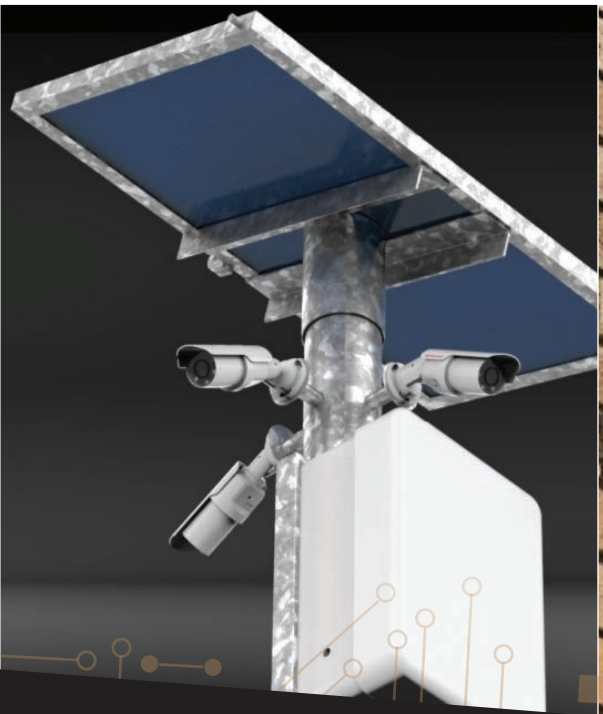
MXTech RMS “Camera Secuity In-a-box” Concept

MXTech aims to develop a self-contained system that can be easily mounted onto various types of infrastructure. This system integrates the RMS power management platform and supports the rapid deployment of CCTV systems with backup power and remote management capabilities.

Sites such as telecommunications facilities, storage containers, and other remote infrastructure locations are often left unprotected, making them vulnerable to vandalism and theft. By implementing a proactive security solution, these sites can be better monitored and safeguarded, enabling improved asset management and centralized oversight of all locations equipped with the system.

The CCTV systems, enhanced with Artificial Intelligence, can be trained to detect suspicious behavior such as loitering or unusual movement. These systems are monitored in real time by offsite control centers, which respond to alerts triggered by predefined events. This ensures that control personnel are only notified when necessary, allowing for timely and efficient responses.

Additionally, the RMS system includes a built-in accelerometer that detects tampering, impacts, or tilting of the infrastructure. This feature provides early warnings of potential damage or vandalism, further enhancing site security.







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Power Solutions

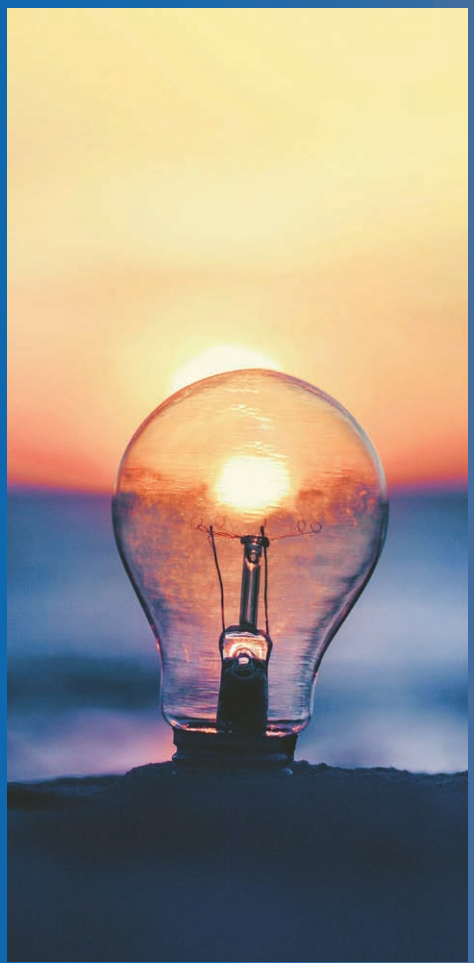


Security Peripherals
PIR, Door Sensors,
Emergency Button,
IP Cameras



Network Peripherals
Wifi Antennas,
ONT devices
and switches





Cost Saving System

Traditional solar systems often require assembling multiple standalone components; such as a charge controller, inverter, GPS, sensors, computing, and communication devices—to achieve full functionality. This approach is not only costly but also inefficient, with overlapping platforms and increased energy consumption.

The RMS system offers a streamlined, all-in-one solution that combines power management and intelligent monitoring. It provides stable power delivery while offering detailed environmental insights, enabling early issue detection, remote management, and optimized maintenance and replacement cycles; all from a centralized control point.

By consolidating multiple functions into a single, integrated platform, the RMS system significantly reduces hardware costs, simplifies deployment, and enhances operational efficiency. This makes it an ideal solution for organizations looking to maximize return on investment while maintaining high levels of control and visibility.

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+27 72 044 1995

Strydompark, Randburg

info@mxtech.co.za

www.mxtech.co.za

